

### REMARKS

Claims 1, 3, 4 and 6 are pending in the present application. Reconsideration and withdrawal of the present rejections in view of the comments presented herein are respectfully requested.

#### Rejection under 35 U.S.C. § 102(b)

Claims 1, 3 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hiraoka et al. (JP 2001-151834). The Examiner alleges that paragraph [0359] of Hiraoka et al. teaches many of the claimed elements, and also contends that this reference teaches the ideal thickness is from 10 to dozens of micrometers. However, Hiraoka et al. does not actually disclose the ideal thickness of the sheet. Rather, Hiraoka et al. discloses that the ideal accelerating voltage for the electron beam depends on the thickness of the target film. This reference does not teach or suggest that the pattern forming material is formed into a sheet having the recited thickness. Thus, claims 1, 3 and 6 cannot be anticipated by this reference.

In response to the remarks submitted with the amendment filed April 14, 2008, the Examiner stated that "the annealing step is an excess step that would obviously be omitted if the desired product was a foamed sheet." However, even if the annealing step is not performed, an unfoamed skin region is formed beneath the surface of a sheet formed using a mixture of poly (*tert*-butylacrylate-co-methylmethacrylate) and diphenyliodonium perfluoro-1-butanesulfonate (a photoacid generator), which is most likely due to low boiling point volatile substances created by decomposition of a decomposition foamable functional group which diffused out of the formed sheet without forming pores therein (see, for example, Figure 2 of *J. Cellular Plastics*, 43:103-109, 2007; Exhibit A). Thus, a foamed sheet would not be obtained even before the annealing step was performed in Example 21 of Hiraoka et al. Since this reference does not teach that such a phenomenon would occur unless a sufficient thickness was provided, one of ordinary skill in the art would not have increased the thickness of the film formed in example 21 of Hiraoka et al. to form a porous structure therein.

Thus, Hiraoka et al. neither disclose nor suggest forming a foamable composition into the shape of a sheet having a thickness of 1  $\mu$ m to 10 mm, and that such a composition should be foamed. Moreover, the foamed sheet resulting from the claimed process could not be obtained using the method disclosed by Hiraoka et al. Accordingly, the Hiraoka et al. reference neither

anticipates nor renders obvious the pending claims, and Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b).

Rejection under 35 U.S.C. § 103(a)

Claims 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiraoka et al. (JP 2001-151834), as applied to claim 1 above. The Examiner submits that it would have been obvious to modify the process of Hiraoka et al. to extrude the foamable composition rather than spin coating since substitution of equivalent sheet forming methods is within routine skill of one in the art. As discussed above, claim 1 is neither anticipated nor rendered obvious by Hiraoka et al. Since claim 4 depends on claim 1, it is also not obvious in view of this reference.

In view of the amendments and comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

CONCLUSION

Applicants submit that all claims are in condition for allowance. However, should there be any questions concerning this application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

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